

AMENDMENTS

In the Claims

✓ 1. (Original) A method of monitoring an oxygen partial pressure in an air mask of an oxygen system, comprising:

generating a signal corresponding to the oxygen partial pressure in the air mask, the signal generated independently of the oxygen system;

comparing the generated signal with a reference signal corresponding to a desired oxygen partial pressure; and

vibrating a portion of the air mask if the generated signal is determined to be lower than the reference signal.

A 1 ✓ 2. (Original) The method according to claim 1, further comprising detecting the oxygen partial pressure in the air mask.

✓ 3. (Original) The method according to claim 1, further comprising sounding an alarm if the generated signal is determined to be lower than the reference signal.

✓ 4. (Original) The method according to claim 1, further comprising amplifying the generated signal.

✓ 5. (Original) The method according to claim 1, further comprising selectively shutting off the generated signal.

✓ 6. (Original) The method according to claim 1, wherein the generated signal is an electric current, further comprising converting the electric current into a corresponding voltage.

✓ 7. (Original) The method according to claim 1, wherein the generated signal is an analog signal, further comprising digitizing the analog signal into a digital signal having a predetermined number of bits.

✓ 8. (Original) The method according to claim 6, wherein the reference signal is stored in a memory unit, the comparing step comprising comparing the digitized generated signal with the stored reference signal.

✓ 9. (Original) The method according to claim 1, wherein the desired signal corresponds to an oxygen partial pressure of about 0.13 or more atmospheres.

✓ 10. (Currently Amended) An apparatus for monitoring an oxygen partial pressure in an air mask of an oxygen system, comprising:

a sensor ~~mounted in the air mask~~ and capable of providing an output signal corresponding to the oxygen partial pressure in the air mask;

a comparator connected to the sensor and configured to compare the output signal with a reference signal corresponding to a desired oxygen partial pressure;

A | a power source connected to the sensor and the comparator, the power source being independent of the oxygen system; and

a vibrator connected to the comparator and configured to vibrate if the generated signal is determined to be lower than the reference signal;

wherein the apparatus is configured to be mounted on the air mask.

✓ 11. (Original) The apparatus according to claim 10, further comprising an alarm connected to the comparator and configured to activate if the generated signal is determined to be lower than the reference signal.

✓ 12. (Original) The apparatus according to claim 10, further comprising an amplifier connected to the sensor and the comparator and configured to amplify the output signal.

✓ 13. (Original) The apparatus according to claim 10, wherein the power source is a communications system power source.

✓ 14. (Original) The apparatus according to claim 10, wherein the power source is a battery unit.

✓ 15. (Original) The apparatus according to claim 10, further comprising a switch selectively capable of disconnecting the power source.

✓ 16. (Original) The apparatus according to claim 10, wherein the output/signal is an electric current, further comprising a current to voltage converter capable of converting the electric current into a corresponding voltage.

✓ 17. (Original) The apparatus according to claim 10, wherein the output signal is an analog signal, further comprising a digitizer capable of digitizing the analog signal into a digital signal having a predetermined number of bits.

✓ 18. (Original) The apparatus according to claim 17, wherein the reference signal is stored in a memory unit, and the comparator is configured to compare the digitized output signal with the stored reference signal.

A1 ✓ 19. (Original) The apparatus according to claim 10, wherein the desired signal corresponds to an oxygen partial pressure of about 0.13 or more atmospheres.

✓ 20. (Original) The apparatus according to claim 10, wherein the sensor, comparator, and vibrator are integrated into a single unit.

✓ 21. (Currently Amended) The apparatus according to claim 10, wherein the ~~air-mask apparatus~~ is configured to be fitted on an air mask of an aircraft pilot's helmet.

✓ 22. (Currently Amended) The apparatus according to claim 20, wherein the ~~air-mask apparatus~~ is configured to be ~~mounted~~ fitted on an air mask of an aircraft pilot's helmet.

✓ 23. (Currently Amended) The apparatus according to claim 10, wherein the ~~air-mask apparatus~~ is configured to be fitted on an air mask of a firefighter's helmet.

24. (Original) The apparatus according to claim 10, wherein the vibrator is attached to an inner surface of the air mask.

25. (Original) The apparatus according to claim 10, wherein the vibrator is attached to an outer surface of the air mask.

✓ 26. (Currently Amended) A device for monitoring an oxygen partial pressure in an air mask of an oxygen system, comprising.

means for generating a signal corresponding to the oxygen partial pressure in the air mask;

means for comparing the generated signal with a reference signal corresponding to a desired oxygen partial pressure;

means for powering the generating means and the comparing means independently of the oxygen system; and

means for vibrating a portion of the air mask if the generated signal is determined to be lower than the reference signal;

wherein the device is configured to be mounted on the air mask.

✓ 27. (Original) The device according to claim 24, further comprising sounding an alarm if the generated signal is determined to be lower than the reference signal.

✓ 28. (Original) The device according to claim 24, further comprising means for amplifying the generated signal.

✓ 29. (Original) The device according to claim 24, further comprising means for disconnecting the powering means.

✓ 30. (Original) The device according to claim 24, wherein the generated signal is an electric current, further comprising means for converting the electric current into a corresponding voltage.

✓ 31. (Original) The device according to claim 24, wherein the generated signal is an analog signal, further comprising means for digitizing the analog signal into a digital signal having a predetermined number of bits.

✓ 32. (Original) The device according to claim 24, wherein the desired signal corresponds to an oxygen partial pressure of about 0.13 or more atmospheres.

33. (Currently Amended) An apparatus for monitoring an oxygen partial pressure in an oxygen mask of an oxygen system of an aircraft, comprising:

✓ a sensor ~~mounted in the air mask~~ and capable of providing an output signal corresponding to the oxygen partial pressure in the air mask;

✓ a comparator connected to the sensor and configured to compare the output signal with a reference signal corresponding to a desired oxygen partial pressure;

✓ an amplifier connected to the sensor and the comparator and configured to amplify the output signal;

✓ a power source connected to the sensor and the comparator, the power source being derived from a communications cord of the aircraft;

a vibrating motor connected to the comparator and attached to a surface of the air mask, the vibrating motor configured to vibrate if the generated signal is determined to be lower than the reference signal;

an alarm connected to the comparator and configured to activate if the generated signal is determined to be lower than the reference signal; and

a switch capable of allowing a user to selectively disconnect the power source;

wherein the apparatus is configured to be mounted on the oxygen mask.

✓ 34. (Currently Amended) A method of ~~monitoring~~ warning that an oxygen partial pressure in an air mask of an oxygen system may be low, comprising:

generating a signal corresponding to the oxygen partial pressure in the air mask, the signal generated independently of the oxygen system;

comparing the generated signal with a reference signal corresponding to a desired oxygen partial pressure; and

activating an alarm connected to the air mask if the generated signal is determined to be outside a predefined reference range.

✓ 35. (Original) The method according to claim 34, further comprising detecting the oxygen partial pressure in the air mask.

✓ 36. (Original) The method according to claim 34, wherein the alarm is a vibrator attached to the air mask.

✓ 37. (Original) The method according to claim 34, further comprising amplifying the generated signal.

✓ 38. (Original) The method according to claim 34, further comprising selectively shutting off the generated signal.

A 1 ✓ 39. (Original) The method according to claim 34, wherein the generated signal is an electric current, further comprising converting the electric current into a corresponding voltage.

✓ 40. (Original) The method according to claim 34, wherein the generated signal is an analog signal, further comprising digitizing the analog signal into a digital signal having a predetermined number of bits.

✓ 41. (Original) The method according to claim 40, wherein the predefined reference range is stored in a memory unit, the comparing step comprising comparing the digitized generated signal with the stored reference range.

✓ 42. (Original) The method according to claim 34, wherein the predefined reference range corresponds to a desired range of oxygen partial pressures.

✓ 43. (Currently Amended) ~~An apparatus for monitoring~~ An air mask capable of warning ~~that an oxygen partial pressure in an the air mask of an oxygen system may be low,~~ comprising:

a sensor ~~mounted in the air mask~~ and capable of providing an output signal corresponding to the oxygen partial pressure in the air mask;

a comparator connected to the sensor and configured to compare the output signal with a reference signal corresponding to a desired oxygen partial pressure;

a power source connected to the sensor and the comparator, the power source being independent of the oxygen system; and

an alarm connected to the comparator and configured to actuate if the generated signal is determined to be outside a predefined reference range.

✓ 44. (Currently Amended) The ~~apparatus~~ air mask according to claim 43, wherein the alarm is a vibrator ~~attached to the air mask~~.

✓ 45. (Currently Amended) The ~~apparatus~~ air mask according to claim 43, further comprising an amplifier connected to the sensor and the comparator and configured to amplify the output signal.

A1 ✓ 46. (Currently Amended) The ~~apparatus~~ air mask according to claim 43, wherein the power source is a communications system power source.

✓ 47. (Currently Amended) The ~~apparatus~~ air mask according to claim 43, wherein the power source is a battery unit.

✓ 48. (Currently Amended) The ~~apparatus~~ air mask according to claim 43, further comprising a switch selectively capable of disconnecting the power source.

✓ 49. (Currently Amended) The ~~apparatus~~ air mask according to claim 43, wherein the output signal is an electric current, further comprising a current to voltage converter capable of converting the electric current into a corresponding voltage.

✓ 50. (Currently Amended) The ~~apparatus~~ air mask according to claim 43, wherein the output signal is an analog signal, further comprising a digitizer capable of digitizing the analog signal into a digital signal having a predetermined number of bits.

✓ 51. (Currently Amended) The ~~apparatus~~ air mask according to claim 50, wherein the predefined reference range is stored in a memory unit, and the comparator is configured to compare the digitized output signal with the stored reference range.

✓ 52. (Currently Amended) The ~~apparatus~~ air mask according to claim 43, wherein the predefined reference range corresponds to a desired range of oxygen partial pressures.

✓ 53. (Currently Amended) The ~~apparatus~~ air mask according to claim 43, wherein the sensor, comparator, and vibrator are integrated into a single unit.

A 1 ✓ 54. (Currently Amended) The ~~apparatus~~ air mask according to claim 43, wherein the air mask is configured to be fitted on an aircraft pilot's helmet.

✓ 55. (Currently Amended) The ~~apparatus~~ air mask according to claim 43, wherein the air mask is configured to be fitted on a firefighter's helmet.

56. (Currently Amended) The ~~apparatus~~ air mask according to claim 43, wherein the vibrator is attached to an inner surface of the air mask.

57. (Currently Amended) The ~~apparatus~~ air mask according to claim 43, wherein the vibrator is attached to an outer surface of the air mask.
